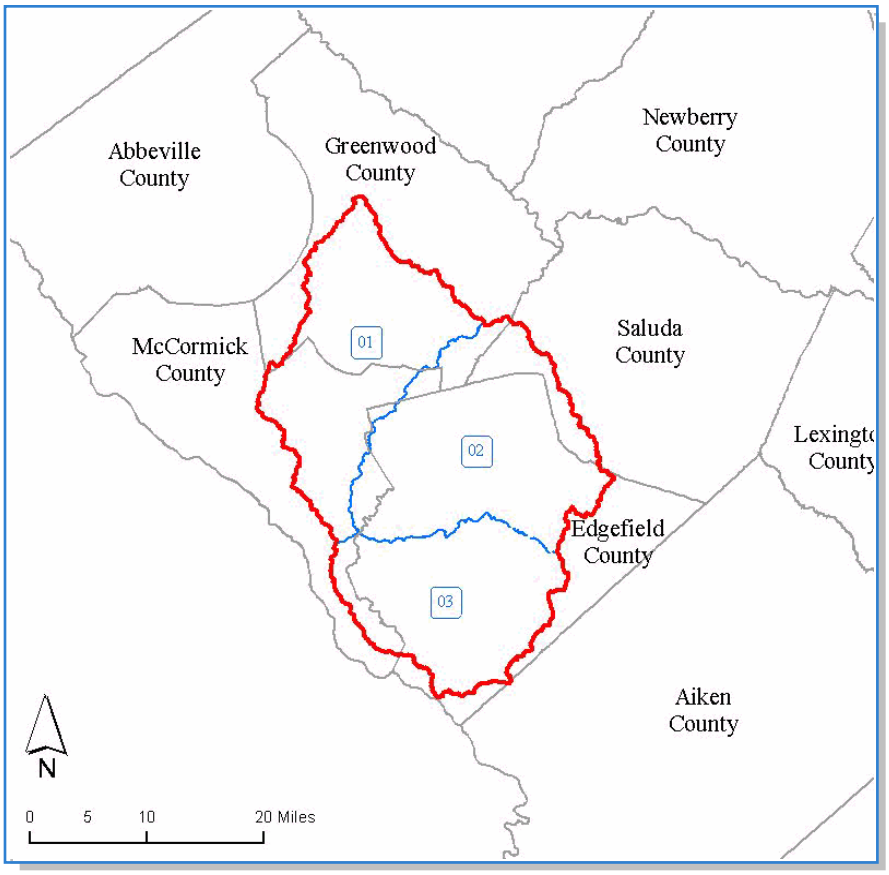
STEVENS Subbasin

August 31, 2007

An Assessment of the Stevens Subbasin

Hydrologic Unit Code (8 Digit): 03060107



WATERSHED (10-digit HUC)
(E.g., 01 = 0306010701)

- 01 Upper Stevens Creek
- 02 Turkey Creek-Stevens Creek
- 03 Lower Stevens Creek

NRCS
Natural Resources Conservation Service

EXECUTIVE SUMMARY

Watershed Description

The northernmost part of the subbasin lies in Greenwood, SC, and the confluence of the Hard Labor, Rocky, and Cuffytown Creeks form the Stevens Creek on the watershed's western boundary. Turkey Creek joins Steven's Creek from the east about halfway through the subbasin. The Stevens Creek drains approximately 740 square miles (473,408 acres) into the Savannah River about three miles upstream of where I-20 crosses the SC-GA border.

The subbasin lies almost entirely in the Piedmont (65) ecoregion (Figure 1). A brief description of the Level III ecoregions in this watershed is available in this document's appendix. A more detailed description of the Level III and Level IV Common Resource Areas (Ecological Regions) is available online (See Griffith *et al.* 2002 in References section.).

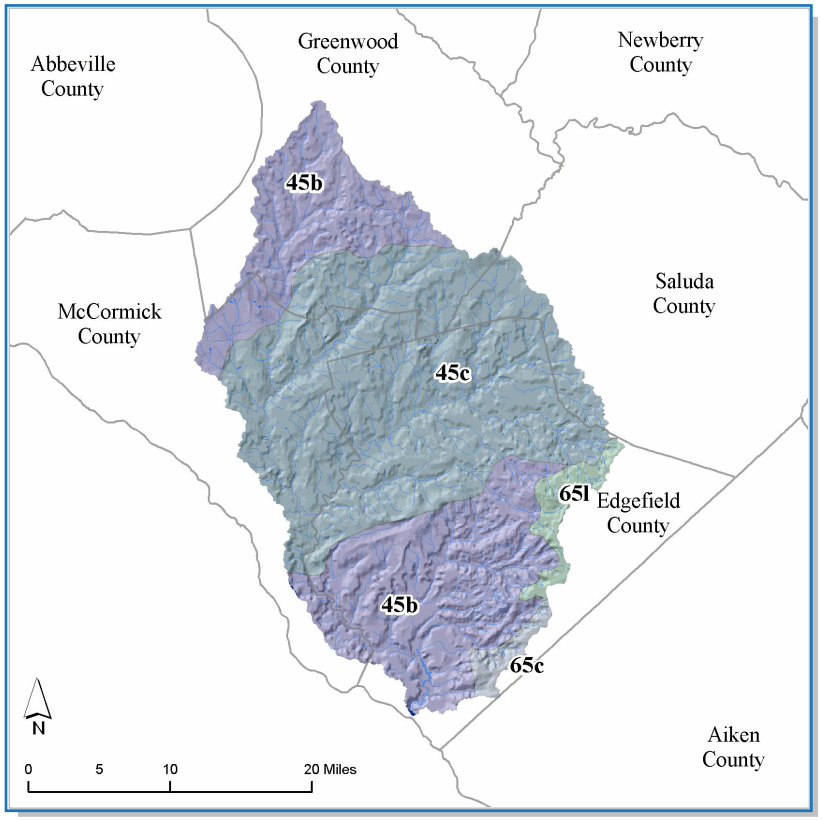


FIGURE 1:
LEVEL IV ECOLOGICAL REGIONS

45b	Southern Outer Piedmont
45c	Carolina Slate Belt
65c	Sand Hills
65l	Atlantic Southern Loam Plains

EXECUTIVE SUMMARY

Land Use/Land Cover

The most striking feature of this watershed's land use is that much of it is covered by the Sumter National Forest (Figure 2). Urban areas (Greenwood and Edgefield) cover very little of the watershed and, because of THE extent of the park, there is a relatively low percentage of agricultural land (Table 1). Edgefield County , with the most agricultural land in the subbasin, ranks first in the state with respect to peach sales.

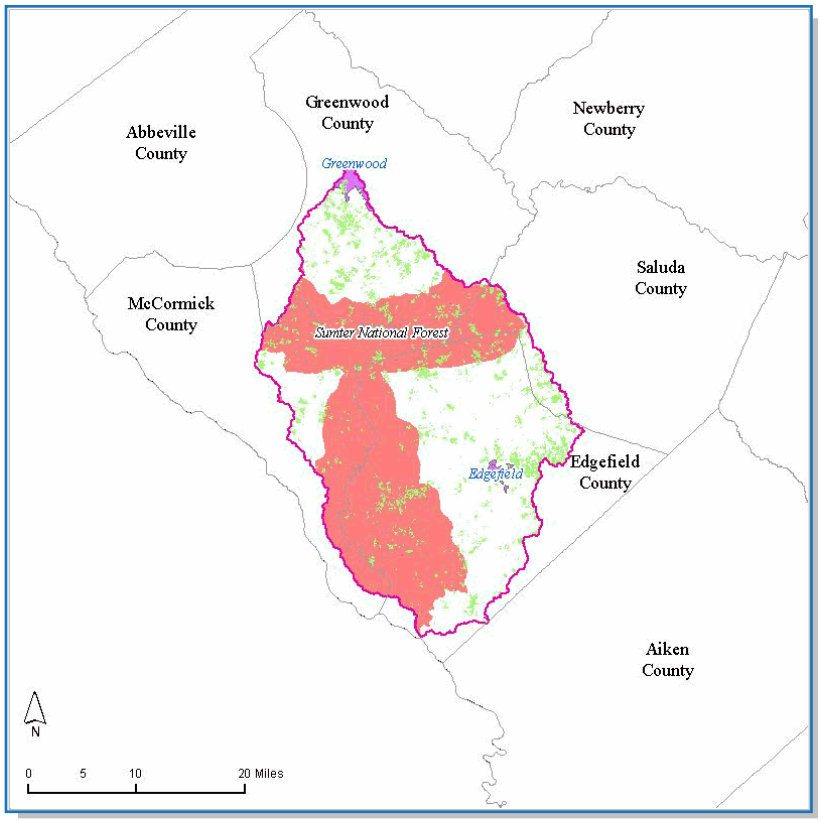


FIGURE 2:
MAJOR LAND USE/LAND COVER CATEGORIES

- FSA Farm Fields
- Urban Areas
- Parks & Land Under Easement
- Other Land

Table 1:
MAJOR LAND USE/LAND COVER CATEGORIES

	Acres	% of Watershed
Watershed (Total)	473,408	-
Urban Area	4,773	1%
Parks/Land Under Easement (not NRCS)	226,444	48%
Farm Service Agency Designated Farm Fields	39,322	8%

Table 2:
AGRICULTURAL LAND USE: FSA ACREAGE AND ESTIMATED FARM FIELD USE FROM THE 2002 AG CENSUS
(NASS Whole County Data Used. Cropland includes: Field Crops, Orchards, and Specialty Crops.)

County	FSA Fields (Acres)	% Pasture (Estimated)	% Cropland (Estimated)	% Hayland (Estimated)
Edgefield	19,423	21%	56%	24%
Greenwood	11,993	49%	15%	36%
McCormick	4,419	56%	10%	33%
Saluda	3,487	39%	25%	36%

EXECUTIVE SUMMARY

Summary of Resource Concerns

The following is a summary of resource concerns for the watershed. Each resource concern has a more detailed analysis provided in its corresponding section.

Soils
Land capability limitations are dominated by erosion in this subbasin that consists of both Piedmont and Coastal Plain areas; highly erodible and potentially highly erodible soils comprise 90% of the subbasin and are the key resource concerns.

Water Quantity
Awaiting SCDNR's 2007 state water assessment.

Water Quality
Fecal coliform and biological (benthic invertebrate) impairments.

Plant Condition
The most prominent crops in the subbasin include peaches, rye for grain, and forage.

Fish, Wildlife, and Native Plants
According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: this is one of the few subbasins in South Carolina known to host the Carolina Heelsplitter, *lasmigona decorata*.

Biologists have identified habitat protection as one of the most important actions to ensure the protection of South Carolina priority species. Loss and fragmentation of habitat have been identified as a major threat to many of the species listed as threatened and endangered in South Carolina.

Domestic Animals
Grazing and confined livestock populations are limited.

Economic and Social Factors
Edgefield County , with the most agricultural land in the subbasin, ranks first in the state with respect to peaches sales.

EXECUTIVE SUMMARY

Progress on Conservation

Table 3:
A SUMMARY OF NRCS APPLIED CONSERVATION TREATMENTS (ACRES)
(See Appendix for NRCS Conservation Practices used for Conservation Treatment Categories.)
(Applied practice data is reported on a fiscal year basis commencing on October 1st)

Conservation Treatments	2004	2005	2006	Total
Buffers and Filter Strips	43	-	2	45
Conservation Tillage	614	5	26	645
Erosion Control	327	20	90	436
Irrigation Water Management	-	230	-	230
Nutrient Management	1,687	549	652	2,888
Pest Management	2,176	581	462	3,219
Prescribed Grazing	473	98	89	660
Trees and Shrubs	2,872	683	613	4,168
Wetlands	-	-	-	-
Wildlife Habitat	2,584	1,172	1,001	4,757

Table 4:
LANDS REMOVED FROM PRODUCTION BY FARM BILL PROGRAMS (WHOLE COUNTY DATA SHOWN)

County	Conservation Reserve Program (ac) 2005	Conservation Reserve Program (ac) 1986 - 2005	Grassland Reserve Program (ac) 2005	Farmland & Ranch Protection Program (ac) 2005	Wetland Reserve Program (ac) 2005
Edgefield	2,360	46,975	-	-	-
Greenwood	466	9,802	-	-	10
McCormick	255	3,559	72	-	-
Saluda	4,003	82,820	100	-	46

Table 5:
APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL)
(See SCDHEC 2007 (a) in Reference Section.) - SCDHEC Contact: Matt Carswell - (803) 898-3609

TMDL Document	Numberof Stations	Parameter of Concern	Status	WQMS ID Standard Attained
Cuffytown Creek	1	Fecal Coliform	Completed & Approved	-
Hard Labor Creek	1	Fecal Coliform	Completed & Approved	-

Table 6:
OTHER PLANS, ASSESSMENTS, AND PROJECTS IN THE WATERSHED

Organization	Description	Contact	Telephone
SCDHEC	Watershed Water Quality Assessment: Savannah River Basin (2003)	Richelle Tolton	803-898-4213

EXECUTIVE SUMMARY

Other Watershed Considerations

Upper and Lower Stevens Creek and Turkey Creek are considered valuable canoeing and recreational rivers.

The Steven's Creek Heritage Preserve covers 434 acres in McCormick and Edgefield counties and harbors 15 rare plant species. It is an important, protected site for the state endangered Webster's salamander.

RESOURCE CONCERNS

Soils

The Stevens subbasin contains two major land resource areas the Coastal Plain (Sand Hills and Atlantic Southern Loam Plains) which makes up about 10% of the subbasin and the Piedmont region (Carolina Slate Belt and Southern Outer Piedmont) which comprises the remaining 90%. A majority (85%) of land in this subbasin has limitations due to erosion (Table 7). Most of the erosion is associated with sloping areas on the Piedmont uplands in the middle and eastern parts of the subbasin (Figure 4, Table 9). Soils that occur in the Coastal Plain areas do not have erosion concerns (Figure 4). Low soil organic matter in the highly erodible soils is a soil health concern. Droughtiness is a major concern in about 7% of the area (Table 7) and occurs mostly in the sandy soils of the Sand Hills (Figure 1). Low soil organic matter in these sandy soils is a soil health concern. Hydric soils and wetness are not major resource concerns in this subbasin with 96% of the land classified as not hydric (Figure 5, Tables 7 and 10). Almost all of the hydric and potentially hydric soils occur in riparian areas. Over 70% of the land in the Stevens subbasin is either prime farmland (46%) or statewide important farmland (26%) and occurs throughout the subbasin with the exception of the Sand Hills (Figure 3, Table 8).

Table 7:
LAND CAPABILITY CLASSES (See NRCS 2007 [a] and [b] in References section.)

Percentages are based on the whole watershed (473,408 ac).

Land Capability Class 1	Acres	Percent
1 - Slight limitations	1,156	0%

	% Land by Subclass Limitation					
	Erosion (e)		Wetness(w)		Droughtiness (s)	
Land Capability Classes 2-8	Acres	Percent	Acres	Percent	Acres	Percent
2 - Moderate limitations	194,715	41%	16,370	3%	3,066	1%
3 - Severe limitations	129,569	27%	8,605	2%	5,483	1%
4 - Very severe limitations	41,393	9%	2,833	1%	14,965	3%
5 - No erosion hazard, but other limitations	-	-	311	0%	-	-
6 - Severe limitations; unsuitable for cultivation; limited to pasture, range, forest	30,397	6%	-	-	4,702	1%
7 - Very severe limitations; unsuitable for cultivation; limited to grazing; forest, wildlife habitat	8,772	2%	-	-	4,642	1%
8 - Miscellaneous areas; limited to recreation, wildlife habitat, water supply	-	-	-	-	743	0%

RESOURCE CONCERNS

Prime Farmland

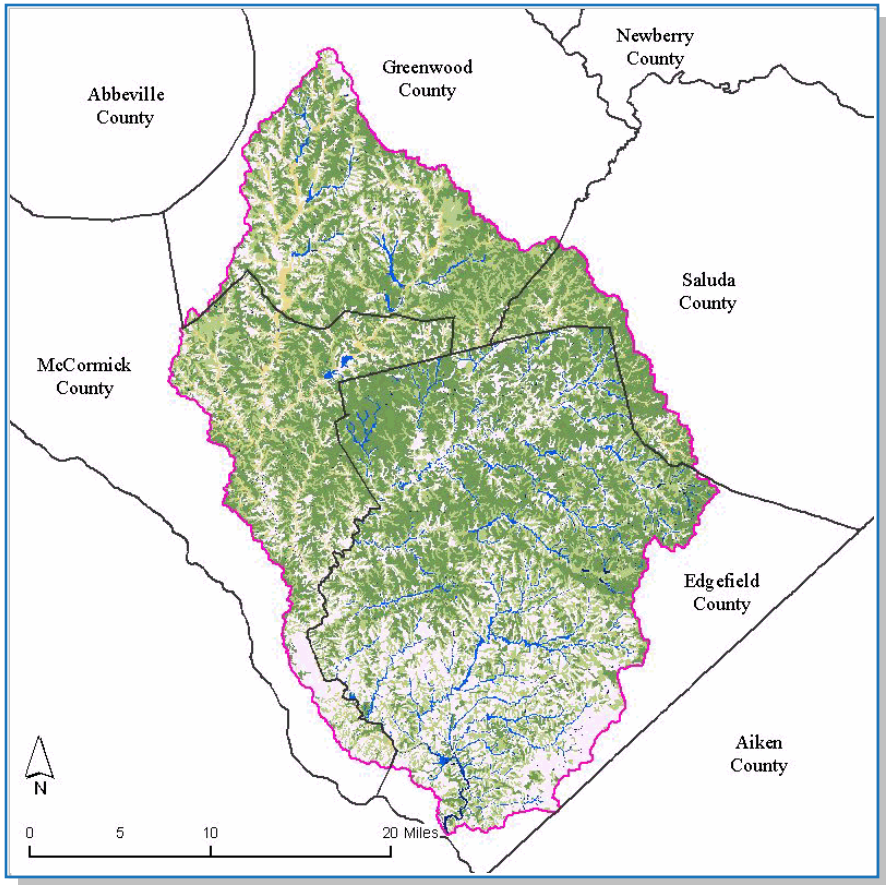


FIGURE 3:
PRIME FARMLAND
(See NRCS 2007 [a] and [b] in References section.)

Table 8:
PRIME FARMLAND

Prime Farmland Categories	Acres	Percent of Land
All areas are prime farmland	190,289	40%
Farmland of statewide importance	124,466	26%
Not prime farmland	130,626	28%
Prime farmland if drained	0	0%
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	13,153	3%
Prime farmland if irrigated	0	0%
Prime farmland if irrigated and drained	0	0%
Prime farmland if protected from flooding or not frequently flooded during the growing season	14,873	3%

RESOURCE CONCERNS

Highly Erodible Land

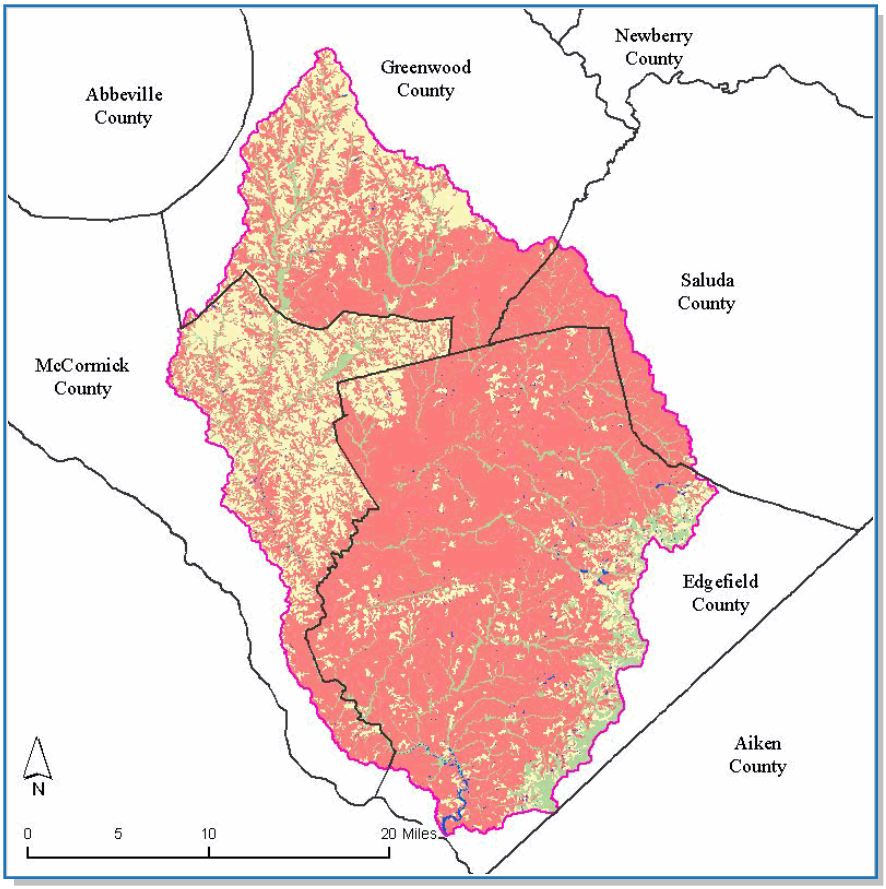


FIGURE 4:
HIGHLY ERODIBLE LAND
(See NRCS 2007 [a] and [b] in References section.)

Table 9:
HIGHLY ERODIBLE LAND

Highly Erodible Land Categories	Acres	Percent of Watershed
Highly erodible land	327,769	69%
Not highly erodible land	41,753	9%
Potentially highly erodible land	101,516	21%

RESOURCE CONCERNS

Hydric Soils

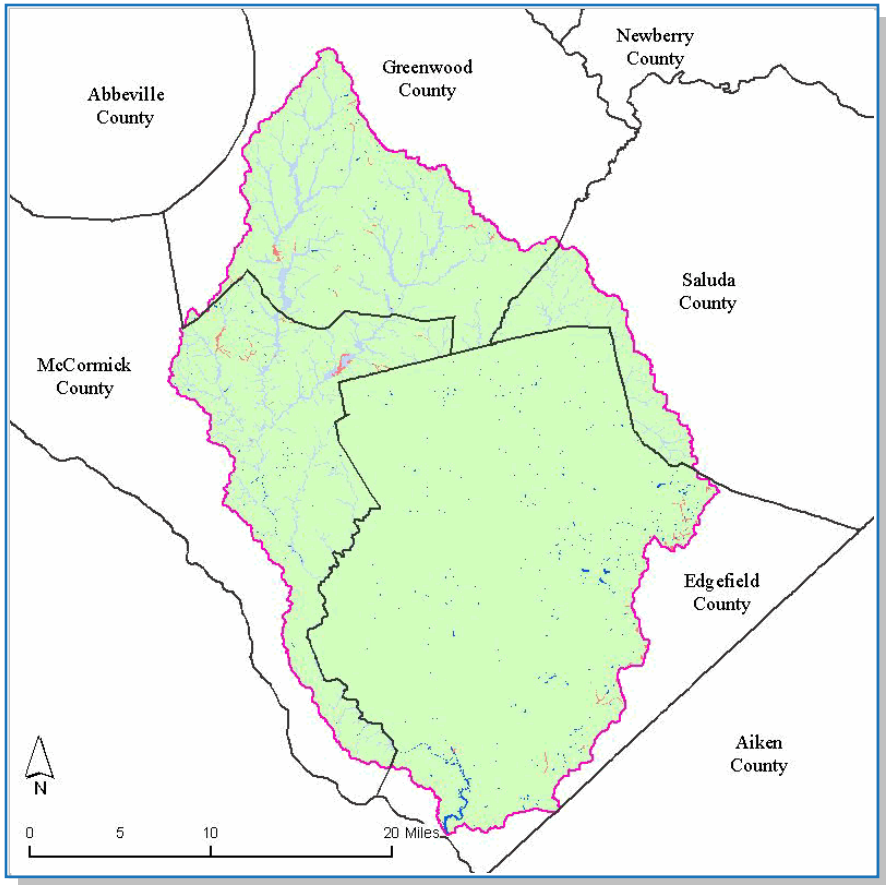


FIGURE 5:
HYDRIC SOILS
(See NRCS 2007 [a] and [b] in References section.)

Table 10:
HYDRIC SOILS

Hydric Soils Categories	Acres	Percent of Watershed
All Hydric	1,486	0%
Not Hydric	456,655	96%
Partially Hydric	15,268	3%

RESOURCE CONCERNS

Water Quantity

With much of the subbasin covered by the Sumter National Forest, there are no *apparent* water quantity limitations although irrigation demand in Edgefield County (Figure 6, Table 12) is significant but not overwhelming, e.g., Orangeburg County irrigation usage is 47.6 MGD. Another agricultural use for water is for watering confined and pastured livestock. While this use is less intensive than for irrigation, it is typically more widespread.

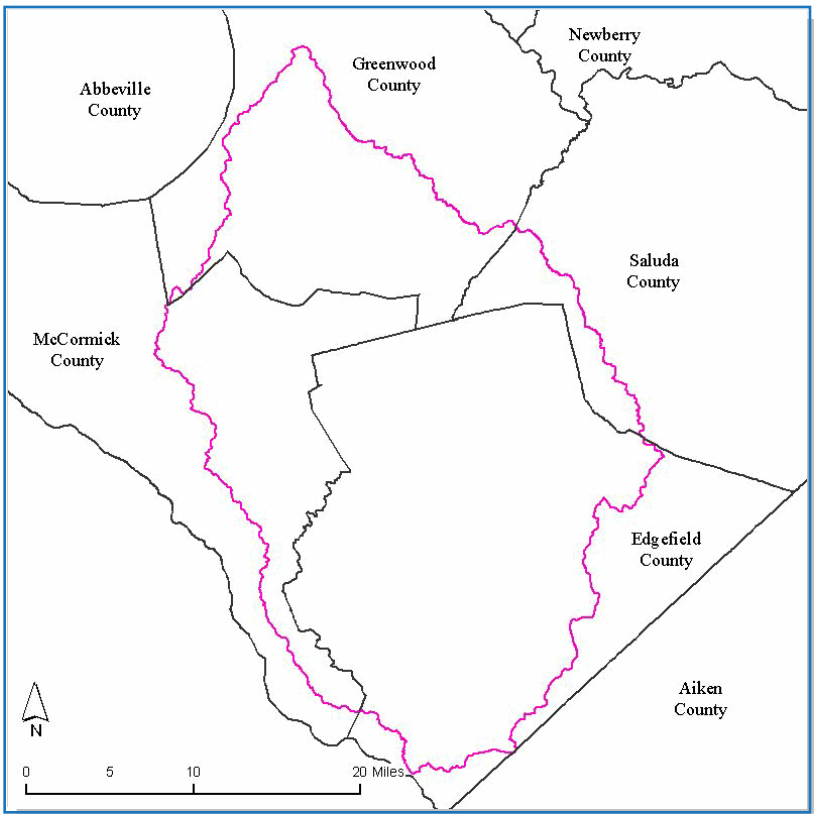


FIGURE 6:
WATERSHED RELATIVE TO CAPACITY USE AREAS, NOTICE OF INTENT AREAS, AND CONES OF DEPRESSION

Table 11:
CAPACITY USE, NOTICE OF INTENT, AND CONES OF DEPRESSION AREA IN WATERSHED
(See SCDHEC 2007 [c] and SCDNR 2004 in Refrerences Section.)

Area	Percent of Watershed
% Watershed in Cone of Depression and Capacity Use (CU) Area	0%
% Watershed in SCDHEC Capacity Use (CU) Area	0%
% Watershed in SCDHEC Notice of Intent (NOI) Area	0%

RESOURCE CONCERNS

Water Quantity Cont.

Table 12:
INDICATORS OF IRRIGATION WATER USAGE (WHOLE COUNTY DATA ARE USED)
(See NASS 2002 and SCDNR 2004 in References Section)

County	Total Irrigated Water Used MGD	Total NASS Cropland (ac)	Cropland Under Irrigation (ac)	Percent Cropland Under Irrigation	Water Use Gal/Ac/Day for Irrigated Land
Edgefield	7.33	25,960	5,304	20.4	1,382
Greenwood	0.09	25,075	179	0.7	503
McCormick	1.34	5,430	15	0.3	89,333
Saluda	6.07	45,374	3,504	7.7	1,732

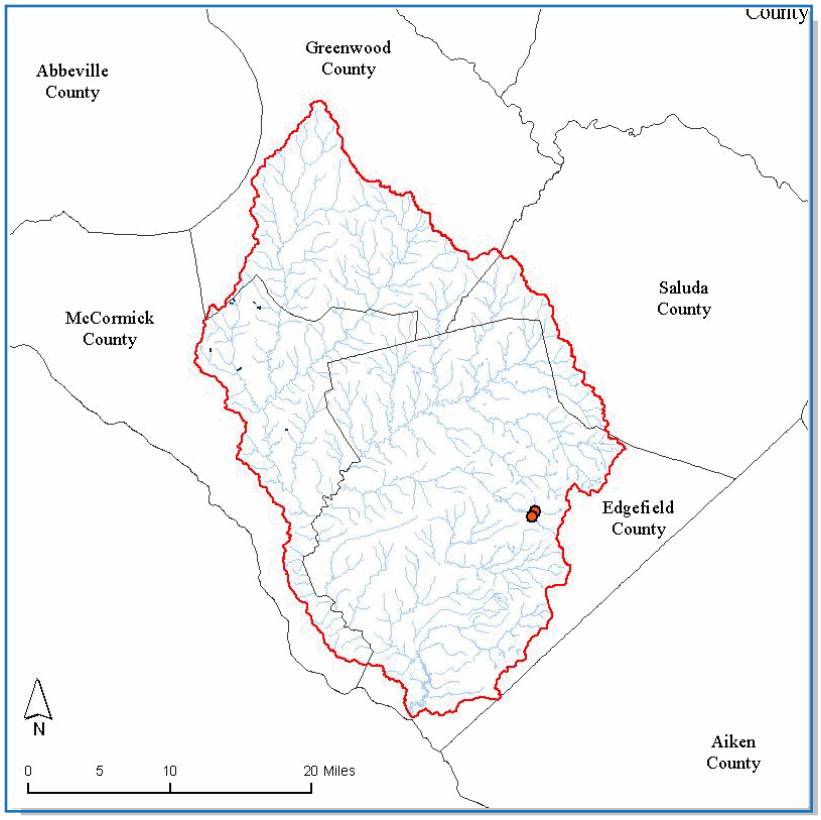


FIGURE 7:
NRCS ASSISTED FLOOD CONTROL STRUCTURES IN WATERSHED

Flood Control Structure
Main River
Hydrography

Table 13:
NRCS IMPLEMENTED FLOOD CONTROL STRUCTURES

Number of Structures (in Watershed)	Maximum Storage (AcFt)	Number of Structures by Hazard Class			
		High	Low	Significant	Unclassified
2	2,121	0	2	0	0

RESOURCE CONCERNS

Water Quality

The number of surface water quality impairments is shown in Table 15 resulting in a "303(d)" listing of that Water Quality Monitoring Site (WQMS). Table 5 indicates what progress has been made to address surface water quality through the Total Maximum Daily Load (TMDL) process. Once a TMDL plan is approved, the WQMS is removed from the 303(d) list even though the standard may not have been attained. Note that standards for total nitrogen, total phosphorus, and chlorophyll-a only exist for lakes; therefore, no stream in the state can be listed for any of these three parameters.

The fecal coliform concern will be addressed through ongoing TMDLs (Table 5). The other primary water quality concern is related to biological (benthic invertebrate) impairments (Table 15).

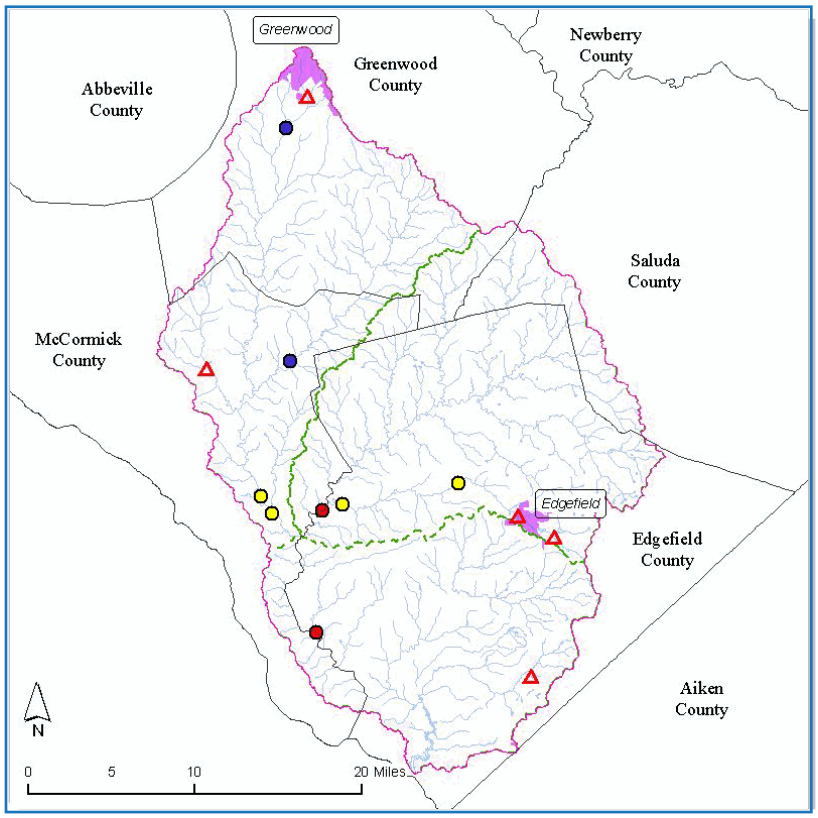


Table 14:
WATER QUALITY MONITORING SITES

Permanent Water Quality Monitoring Sites (WQMS)	8
Random Water Quality Monitoring Sites (WQMS)	2

FIGURE 8:
PERMANENT WATER QUALITY MONITORING SITES

- WQMS (No Impairment)
- WQMS (303d Listed)
- WQMS (Approved TMDL)
- Waste Water Treatment Plant
- Hydrography
- Hydrologic Unit Code 10 Boundary

Table 15:
NUMBER OF MONITORING SITES SHOWING SURFACE WATER QUALITY IMPAIRMENTS
(See SCDHEC 2006 in References for the state 303(d) list.)

Recreational Use Standard

Parameter	Impairments
Fecal Coliform	2

Fish Tissue Standard

Parameter	Impairments
Mercury	0
PCB's	0

Shellfish Harvest Standard

Parameter	Impairments
Fecal Coliform	NA

Aquatic Life Use Standard

Parameter	Impairments	Parameter	Impairments	Parameter	Impairments
Biological	5	Dissolved Oxygen	0	Total Phosphorus	0
Chlorophyll A	0	Ammonia Nitrogen	0	pH	0
Chromium	0	Nickel	0	Turbidity	0
Copper	1	Total Nitrogen	0	Zinc	0

RESOURCE CONCERNS

Plant Condition

Plants of Economic Importance

Plants of economic importance are shown in Table 16. The crops shown in this table are from NASS data where the top five crops, by acres, in each county are displayed. The timber statistics (see Clemson Extension Forest Services 2003 in References) indicate the relative importance of the timber industry within the state and the importance of the timber industry compared to agriculture within the county.

The most prominent crops in the subbasin include peaches (Edgefield is the top peach producer in the state), rye for grain and forage.

Native Plant Species

According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: the subbasin plant community consists of oak and hickory-dominated forest with dominant and associated tree species varying with position on slope and soil moisture. This is the primary potential vegetation type on the Piedmont. On a majority of sites it exists mostly in closed canopy pine-dominated stages. Given the large area covered in the subbasin by the Sumter National Forest, plant species compositions and diversity tends to be high. In South Carolina, the Stevens Creek is the only known drainage area to contain the Florida gooseberry (*Ribes echinellum*).

Invasive species of concern include the Japanese honeysuckle, the privet and the tropical soda apple.

Table 16:
WHOLE COUNTY DATA OF PLANTS OF ECONOMIC IMPORTANCE IN SUBBASIN
(See: USDA NASS 2002 & Clemson University Forest Extension Services 2003 in References section)

Plant	Counties
All Wheat for grain	Saluda, Greenwood
Corn for grain	Saluda
Corn for silage	Saluda
Forage - land used for all hay and haylage, grass silage, and greenchop	Saluda, Greenwood, Edgefield, McCormick
Oats	McCormick, Edgefield, Greenwood
Peaches	Edgefield, Saluda
Pecans	Greenwood, McCormick
Rye for grain	Edgefield
Short-rotation woody crops	Greenwood
Soybeans	Edgefield
Timber Revenues Exceed Ag. Revenues	Greenwood

RESOURCE CONCERNS

Table 17:
FEDERALLY LISTED THREATENED AND ENDANGERED PLANT SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Piedmont bishop-weed	*Ptilimnium nodosum*	Endangered
Georgia aster	*Aster georgianus*	Supported Proposals to List
Relict trillium	*Trillium reliquum*	Endangered
Miccosukee gooseberry	*Ribes echinellum*	Threatened
Little amphianthus	*Amphianthus pusillus*	Threatened
Smooth coneflower	*Echinacea laevigata*	Endangered

RESOURCE CONCERNS

Fish and Wildlife

This is one of the few subbasins in South Carolina known to host the Carolina Heelsplitter, *lasmigona decorata*.

For additional information, the SC Department of Natural Resources has completed a "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section).

In 2005, mercury advisories were issued for 57 water bodies in South Carolina. Higher concentrations of mercury in fish tissue tend to occur in the Coastal Plain of South Carolina with relatively lower concentrations (and therefore fewer advisories) in the Piedmont. For more details on fish advisories, please refer to the SCDHEC fish advisory website at: **http://www.scdhec.gov/environment/water/fish/**

Table 18:
FEDERALLY LISTED THREATENED AND ENDANGERED WILDLIFE SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Wood stork	*Mycteria americana*	Endangered
Red-cockaded woodpecker	*Picoides borealis*	Endangered

Table 19:
FEDERALLY LISTED THREATENED AND ENDANGERED AQUATIC SPECIES IN WATERSHED
(See USFW 2006 in References section.)

Common Name	Latin Name	Status
Shortnose sturgeon	*Acipenser brevirostrum*	Endangered
Carolina heelsplitter	*Lasmigona decorata*	Endangered
Carolina heelsplitter	*Lasmigona decorata*	Endangered, Critical Habitat

ECONOMIC & SOCIAL FACTORS

Domestic Animals

Grazing livestock populations are modest (Table 20) and limited to areas outside of the Sumter National Forest, which covers almost half of the subbasin (Figure 2). Confined livestock is limited to a small number of poultry and dairy operations in the subbasin (Figure 9).

Table 20:
WHOLE COUNTY GRAZING ANIMAL POPULATION DATA FROM 2002 AG. CENSUS
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Cows/Calves	Grazing/Forage (ac)	County Rank in State
Edgefield	9,507	5,403	20
Greenwood	13,667	12,343	12
McCormick	3,527	3,062	(D)
Saluda	26,667	17,782	2

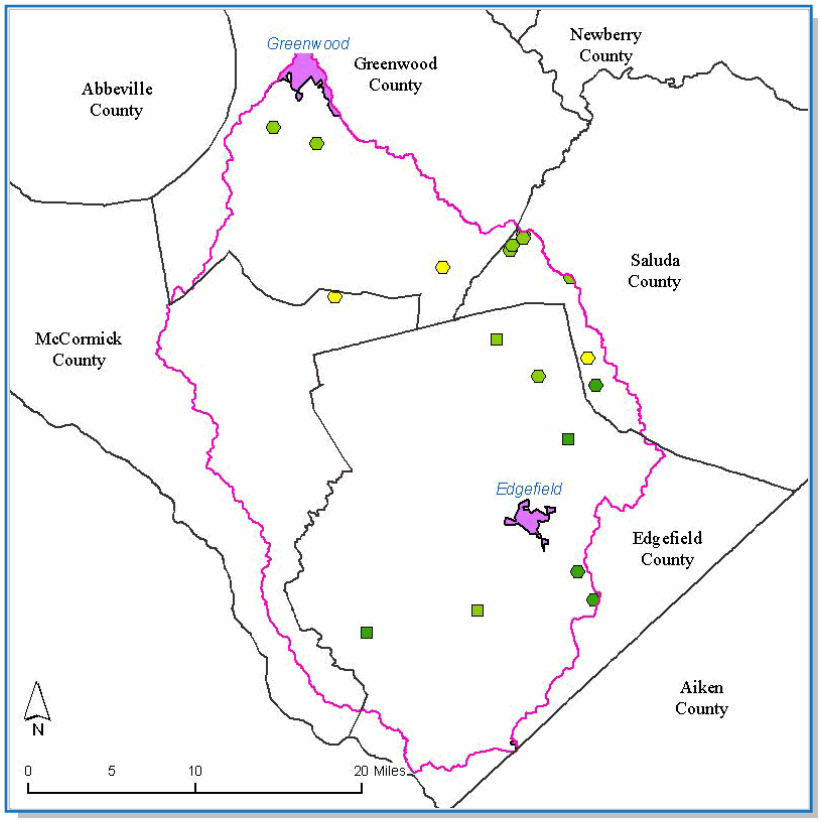


Table 21:
CONFINED ANIMAL POPULATION [As given by SCDHEC] (Au = Animal Unit = 1,000 lbs)

Beef Live Weight (Au)	-
Dariy Live Weight (Au)	798
Horse Live Weight (Au)	-
Poultry Live Weight (Au)	3,254
Swine Live Weight (Au)	-
Turkey Live Weight (Au)	-

FIGURE 9:
TYPE AND SIZE OF CONFINED ANIMAL OPERATION

Permit Design Count (Live Weight AU)
- 0 - 163
- 164-372
- 373 - 680
- 681 - 1360
- 1361 - 7076

- Beef
- Dairy
- Other
- Poultry
- Swine
- Turkey

* Weighted averages are estimated based on agricultural land use area.

ECONOMIC & SOCIAL FACTORS

The number of full-time farmers and farm sizes are state averages of 47% and 197 ac, respecitvely (Table 22); both parameters suggest average levels of participation in conservation programs. Farm sizes have however, *decreased* by an estimated 6% between 1997 and 2002, lower than the 13% across the state for the same period. Loss of cropland between 1997 and 2002 is estimated at 6%, lower higher than the SC average cropland loss of 8%.

The relative importance of crop and livestock commodity groups in the watershed is shown in Tables 24 and 25; a *qualitative* indication of the relative importance of timber is provided on Table 16.

Edgefield County, with the most agricultural land in the subbasin, ranks first in the state with respect to peach sales.

For more economic and farm information from the 2002 Agricultural Census, more detailed reports for all South Carolina counties can be found at:
http://www.nass.usda.gov/census/census02/profiles/sc/index.htm

Table 22:
2002 FARM CENSUS DATA (WHOLE COUNTY DATA SHOWN) (SC average farm size = 197 ac)

County	Total Number of Farms	% Full Time Farmers	% Farms > 180 (ac)	Average Farm Size (ac)
Edgefield	325	45%	27%	229
Greenwood	501	46%	20%	161
McCormick	97	38%	34%	240
Saluda	574	54%	25%	186
Weighted Avg*	**372**	**45%**	**25%**	**204**

Table 23:
2002 FARM CENSUS ECONOMIC DATA (WHOLE COUNTY DATA SHOWN) (Results in $1,000)

County	Market Value of Ag Products Sold	Market Value of Crops Sold	Market Value of Livestock, Poultry, and Their Products	Farms with sales < $10,000
Edgefield	48,554	44,560	3,994	250
Greenwood	5,719	1,211	4,508	-
McCormick	1,530	132	1,397	76
Saluda	64,038	5,511	58,527	401
Weighted Avg*	**31,439**	**22,708**	**8,731**	**167**

Table 24:
VALUE OF CROP COMMODITY GROUPS - COUNTY RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of All Crops	Grains & Oilseeds	Tobacco	All Cotton	Vegetables & Melons	Fruits, Nuts, & Berries	Nursery, Etc.	Christmas Trees & Woody Crops	Hay & other Crops
Edgefield	1	28	-	(D)	17	(D)	(D)	(D)	13
Greenwood	43	(D)	-	-	32	13	33	(D)	34
McCormick	46	(D)	-	-	(D)	42	(D)	(D)	46
Saluda	30	33	-	(D)	(D)	3	35	12	23

REFERENCES

Table 25:
VALUE OF LIVESTOCK AND POULTRY COMMODITY GROUPS - RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

County	Value of Livestock, poultry	Poultry, Eggs	Cattle & Calves	Milk & Dairy	Hogs & Pigs	Sheep & Goats	Horses, etc.
Edgefield	31	33	20	10	40	(D)	17
Greenwood	30	28	12	21	(D)	21	29
McCormick	41	(D)	(D)	(D)	(D)	34	44
Saluda	3	4	2	6	(D)	25	(D)

REFERENCES

Clemson University Extension Forest Service. 2001. *Cash Receipts from Timber Harvests - 2001 Ag and Timber Comparison.*. Compiled by A. Harper. Available at:
http://www.clemson.edu/extfor/forest_data/

Griffith, G.E., Omernik, J.M., Comstock, J.A., Schafale, M.P., McNab, W.H., Lenat, D.R., MacPherson, T.F., Glover, J.B., and Shelburne, V.B., 2002, Ecoregions of North Carolina and South Carolina, (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000). Available at:
http://www.epa.gov/wed/pages/ecoregions/ncsc_eco.htm

NatureServe 2006. Distribution of native fish species by watershed. NatureServe. Available at:
http://www.natureserve.org/getData/

South Carolina Department of Health and Environmental Control (SCDHEC) 2006. Listing of Impaired Waters (or 303(d) list). Available at:
http://www.scdhec.gov/environment/water/docs/06_303d.pdf

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (a). Total Maximum Daily Load Documents. Available at:
http://www.scdhec.gov/environment/water/tmdl/tmdlsc.htm

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (b). Watershed Water Quality Assessments. Available at:
http://www.scdhec.gov/environment/water/shed/

South Carolina Department of Health and Environmental Control (SCDHEC) 2007 (c). Water use and reporting Program (Capacity Use) SCDHEC. Available at:
http://www.scdhec.net/environment/water/capuse.htm

South Carolina Department of Natural Resources (SCDNR) 2005. Comprehensive Wildlife Conservation Strategy (2005 - 2010). Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/cwcs

South Carolina Department of Natural Resources (SCDNR) 2002. SC GAP Analysis and Dynamic Mapping. Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/GIS/gap/mapping.html

South Carolina Department of Natural Resources (SCDNR) 2004. South Carolina Water Plan, Second Edition (January 2004). Columbia, SC. SCDNR. Available at:
http://www.dnr.sc.gov/water/hydro/wtrplanerrata.html

USDA Farm Services Agency in South Carolina (FSA-SC) 2006. CRP Data. Columbia SC. USDA/FSA

USDA Natural Resources Conservation Services (NRCS) 2007 (a). National Soil Information System (NASIS). USDA/NRCS. County Soils Data (tabular) information available at:
http://soildatamart.nrcs.usda.gov/

USDA Natural Resources Conservation Services (NRCS) 2007 (b). Soil Survey Geographic (Ssurgo) Database. USDA/NRCS. County Soils Data (spatial). Available at:
http://soildatamart.nrcs.usda.gov/

APPENDIX

USDA Natural Resources Conservation Services in South Carolina (NRCS-SC) 2006. GRP, FRPP, and WHP. Columbia, SC. USDA/NRCS.

USDA National Agricultural Statistical Service (NASS) 2002. 2002 Census of Agriculture. Washington, DC: USDA/NASS.

US Fish and Wildlife Service (USFWS) 2007. USFWS Threatened and Endangered Species System (TESS). Available at:
http://ecos.fws.gov/tess_public/StartTESS.do

US Fish and Wildlife Service (USFWS) 2006. South Carolina Distribution Records of Endangered, Threatened, Candidate and Species of Concern, October 2006. Available at:
http://www.fws.gov/charleston/docs/etcountylist_10_06.htm

APPENDIX

Level III Common Resource Area (Ecological Region) Descriptions

Piedmont (45)

The Piedmont is an erosional terrain with some hills; the soils are generally finer-textured than those found in coastal plain regions with less sand and more clay. Piedmont soils are moderately to severely eroded; most of this region is now in planted pine or has reverted to successional pine and hardwood woodlands, with some pasture; spreading urban- and suburbanization is apparent. The Piedmont of South Carolina is divided into five level IV ecoregions: Southern Inner Piedmont (45a), Southern Outer Piedmont (45b), Carolina Slate Belt (45c), Triassic Basins (45g) and Kings Mountain (45i).

Southeastern Plains (65)

The Southeastern Plains are irregular with broad interstream areas have a mosaic of cropland, pasture, woodland, and forest. In the past centuries, human activities (logging, agriculture and fire suppression) removed almost all of the longleaf pine forests. Elevations and relief are greater than in the Southern Coastal Plain (75), but generally less than in much of the Piedmont (45). The ecoregion has been divided into three level IV ecoregions within South Carolina: Sand Hills (65c), Atlantic Southern Loam Plains (65l), and Southeastern Floodplains and Low Terraces (65p). Note: The Atlantic Southern Loam Plains (65l) is a major agricultural zone, with deep, well-drained soils, and is characterized by high percentages of cropland.

NRCS Conservation Practices used for Conservation Treatment Categories in Table 3

Report Category	Practice Codes
Buffer and Filter Strips	332, 391, 393, 412
Conservation Tillage	324, 329, 329A, 329B, 344, 484
Erosion Control	327, 328, 330, 340, 342, 561, 585, 586
Irrigation Water Management	441, 449
Nutrient Management	590
Pest Management	595
Prescribed Grazing	528, 528A
Trees and Shrubs	490, 612, 655, 656, 66
Wetlands	657, 658, 659
Wildlife Habitat	644, 645

APPENDIX

Hydrologic Unit Numbering System

In 2005, the NRCS in cooperation with the U.S. Geological Survey, the South Carolina Department of Health and Environmental Control, and the U.S. Forest Service updated the South Carolina part of the USGS standard hydrologic unit map series. The report, "Development of a 10- and 12- Digit Hydrologic Unit Code Numbering System for South Carolina, 2005", describes and defines those efforts. The following is from the Abstract contained in that report: "A hydrologic unit map showing the subbasins, watersheds, and subwatersheds of South Carolina was developed to represent 8-, 10-, and 12-digit hydrologic unit codes, respectively. The 10- and 12-digit hydrologic unit codes replace the 11- and 14-digit hydrologic unit codes developed in a previous investigation. Additionally, substantial changes were made to the 8-digit subbasins in the South Carolina Coastal Plain. These modifications include the creation of four new subbasins and the renumbering of existing subbasins." The report may be obtained at **http://www.sc.nrcs.usda.gov/technical/HUC_report.pdf**. See Table 2 in the report for a cross-reference of old to new 8-digit HUC.

This subbasin profile uses the new HUC 8 numbering system with its modified and newly created subbasins. The NRCS reports implemented practices by 8-digit Hydrologic Unit Code. All NRCS reported Conservation Practices were reported using the older numbering system. 2005 and 2006 data were converted to the new HUC 8 numbering system through the Latitude and Longitude data reported with the applied practice. The use of these differing numbering systems has resulted in some NRCS implemented practices being credited in this report to an 8-digit HUC as reported by the NRCS but not correctly credited in the new numbering system. Likewise, the newly created 8-digit HUC will not be credited with the 2004 applied practices.